EPA

United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Form Approved.
OMB No. 2040-0057
Approval expires 8-31-98

Section A: National Data System Coding (i.e., PCS)

Transaction Code	NPDES	yr/mo/day	Inspection Type	Inspector	Fac Type
1 N 2	3 PRR053093 11	12 160812 17	18	19 L	20 2

Remarks: 2 SW Inspection

Inspection Work Days	Facility Self-Monitoring Evaluation Rating	B1	QA	Reserved
6 1 69	70 4	71 n/a	72 n/a	73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected *(for industrial users discharging to POTW, also include POTW name and NPDES permit number*

AES PUERTO RICO, L.P.
Road PR-3, Km. 142, Ward Jobos
Guayama, Puerto Rico 00784

Entry Time/Date	Permit Effective Date
August 12, 2016 8:15 a.m.	2015 MSGP October 3, 2015
Exit Time/Date	**Permit Expiration Date**
August 12, 2016 4:20 p.m.	2015 MSGP June 4, 2020

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

See attached Supplement for list of AES participants.

Name, Address of Responsible Official/Title/Phone and Fax Number(s)

Manuel Mata, President
Tel. #: (787) 866-8117

Contacted: X Yes ☐ No

Other Facility Data

P. O. Box 1890
Guayama, Puerto Rico 00785

See attached Supplement for additional facility informariton.

Section C: Areas Evaluated During Inspection *(Check only those areas evaluated)*

X	Permit		Flow Measurement		Operations & Maintenance		CSO/SSO (Sewer Overflow)
X	Records/Reports	X	Self-Monitoring Program		Sludge Handling/Disposal	X	Pollution Prevention **(SWPPP)**
X	Facility Site Review	X	Compliance Schedules		Pretreatment		Multimedia
X	Effluent/Receiving Water		Laboratory	X	Storm Water	X	Other: **Compliance with AOC**

Section D: Summary of Findings/Comments *(Attach additional sheets of narrative and checklists as necessary)*

See attached Supplement for the summary of findings, comments and areas of concern.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
José A. Rivera, BSCE, Lead Environmental Engineer	USEPA/02/CEPD/MPCB/CWAT	Jan. 4, 2017
José Rivera	Tel.: (787) 977-5865	
	rivera.jose@epa.gov	
Signature of Management Q A Reviewer	**Agency/Office/Phone and Fax Numbers**	**Date**
for Nancy Rodríguez, P.E., Chief, MPCB	USEPA/02/CEPD; (787) 977-5865	01/05/2017

EPA Form 3560-3 (Rev 9-94) Previous editions are obsolete

AES PUERTO RICO, L.P.

Coal-Fired Steam Power Plant and Marine Cargo Handling Dock

Road PR-3, Km. 142, Jobos Ward, Guayama, Puerto Rico 00784
P. O. Box 1890, Guayama, Puerto Rico 00785
Telephone Number: (787) 866-8117
Facsimile Number: (787) 866-8139
Coordinates: Latitude 17° 56' 42" N; Longitude 66° 09' 02" W

2008 MSGP Tracking Number PRR05BL65
2015 MSGP Tracking Number PRR053093

1. INTRODUCTION

This Supplement to the Water Compliance Inspection Report Form is prepared to include all findings and observations concerning the Enforcement Case Support Inspection (Inspection) conducted by Lead Environmental Engineer and Enforcement Officer, José A. Rivera (EPA Inspector), of the United States Environmental Protection Agency's (EPA) Caribbean Environmental Protection Division (CEPD) at the AES Puerto Rico, L.P. (AES) coal-fired steam power plant (the "Plant") located in Guayama, Puerto Rico. The AES marine cargo handling dock (the "Dock") was also part of the Inspection.[1,2]

The purposes of the Inspection were to evaluate AES's compliance with:

1) the Administrative Order on Consent (AOC), Docket Number CWA-02-2015-3102, which was executed under Section 309(a) of the Federal Water Pollution Control Act (CWA), as amended, on March 18, 2015; and

2) the National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities (2015 MSGP), which was issued under Section 404(p) of the CWA, on June 4, 2015.

Upon showing of credentials to the guard on-duty, the Inspection was performed pursuant to the authority in Section 308(a) of the CWA. The Inspection took place on August 12, 2016, from 8:15 a.m. to 4:20 p.m., local time. Dry weather and sunny skies prevailed during the Inspection.

The following AES engineers represented AES during the Inspection's activities, including the entry meeting, Plant and Dock walkthrough, and the exit meeting: Ramiro Rivera, Héctor M. Ávila, Pedro Labayen, and Carlos M. González.

[1] Mr. Andrés Febres Martínez, an EPA Summer Program Intern, participated in the Inspection.
[2] The Plant and Dock are jointly referred herein as the "Facility."

2. PRIOR INSPECTIONS AND ENFORCEMENT ACTIONS

A list of the EPA Inspections at the Facility and the enforcement actions against AES is presented below:

Inspections

- Compliance Evaluation Inspection (1st CEI) – July 20, 2011 and July 26, 2011; 1st CEI Report – October 3, 2011;
- Compliance Evaluation Inspection (2nd CEI) – December 8, 2011; 2nd CEI Report – April 24, 2012;
- Enforcement Case Support Inspection (1st ECSI) – June 19, 2014; 1st ECSI Report – August 26, 2014; and
- Enforcement Case Support Inspection (2nd ECSI) – January 28, 2015.[3]

Administrative Compliance Actions

- Administrative Compliance Order (ACO) – Docket Number CWA-02-2012-3100, dated December 16, 2011; and
- Administrative Order on Consent (AOC) – Docket Number CWA-02-2015-3102, dated March 18, 2015.[4]

Administrative Penalty Actions

- Administrative Consent Agreement and Final Order – Docket Number CWA-02-2012-3452, dated March 20, 2012. AES paid an administrative penalty of $170,000.

3. AES PUERTO RICO, L.P.

AES is a for-profit corporation organized under the laws of the State of Delaware. AES was registered in the Department of State of the Commonwealth of Puerto Rico on August 9, 1999, under registration number 11062 (Source: www.estado.gobierno.pr). AES meets the definition of a "person" pursuant to Section 502(5) of the CWA.

On or about November 2002, AES began to operate its Facility, which is located in the municipality of Guayama, Puerto Rico. AES employs about 130 employees at the Facility.

[3] The 2nd ECSI was primarily a visual assessment of the Plant to support the preparation and issuance of the AOC.
[4] The Ordered Provisions in the ACO were superseded by the Ordered Provisions in the AOC.

4. THE COAL-FIRED STEAM ELECTRIC POWER PLANT

The Plant site is a gated 84-acre parcel of land and leveled above the 100-year flood elevation. The Facility is bordered to the north by TAPI Puerto Rico Inc., a pharmaceutical facility, and vacant lands owned by the Puerto Rico Land Administration; to the east by Chevron Phillips Chemical Puerto Rico Core Inc., a former petrochemical complex; to the south by wetlands and Las Mareas Bay; and to the west by AES Ilumina, LLC, a photovoltaic power generation complex.

The Plant is mainly comprised of employee parking facilities; two (2) coal-fired electric power generation plants that host two (2) electric generators; two (2)nabove-ground coal storage piles; a limestone storage dome; an above-ground fly/bed ashes storage pile known as "Aggremax™" pile; an office building; material and equipment storage buildings; four (4) water retention ponds known as the "Coal Pile Runoff Pond," the "Storm Water Runoff Pond," the "Patillas Channel Pond," and the "Make-up Water Pond;" a cooling tower; water treatment facilities; and contaminated and non-contaminated storm water collection, conveyance and discharge systems.[5]

The primary operations at the Plant are best described by the Standard Industrial Classification (SIC) Code 4911.[6]

General Description about the Unregulated Storm Water Discharges at the Plant

The Plant has two (2) distinct storm water collection and discharge systems. These systems collect storm water runoff generated at adjacent properties (north and northwest of the Plant site, and between TAPI and the plant), and conveys it into wetlands. These storm water runoff discharges are not subject to Section 402(p) of the CWA and its implementing regulations at 40 C.F.R. § 122.26, because these discharges are not associated with any industrial activity, as defined in 40 C.F.R. § 122.26(b)(14).

General Description about the Regulated Storm Water Discharges at the Facility[7]

The regulated storm water runoff associated with the industrial activities at the Plant is managed through two (2) collection and discharge systems, which are mainly composed of inlets, culverts, swales, concrete channels, the Storm Water Runoff Pond, and two (2) discharge points into adjacent wetlands located on the south boundary of the Plant.

In regards to the regulated storm water runoff associated with the industrial activities at the Dock, AES has a collection system in the Dock concrete platform, which conveys the

[5] Generation: 525 megawatts (gross production) and 454 megawatts (net production).
[6] SIC Code 4911 includes establishments engaged in the generation, transmission, and/or distribution of electricity or gas or steam.
[7] AES reuses the storm water runoff collected in the Storm Water Runoff Pond and the Coal Pile Runoff Pond, by means of transferring the collected water to the Make-up Water Pond, which is further used in power generating activities.

collected storm water runoff into the discharge point into Las Mareas Bay.

The following pictures were taken by the EPA Inspector during the course of the Inspection walkthrough at the Facility, and depict Outfall 001, Outfall 002, and Outfall 003.

Picture 1 – Outfall 001

Note: This outfall discharges storm water associated with industrial activity from the Dock into Las Mareas Bay. AES purchased and installed an automatic sampler and weather station powered by solar energy. A discharge into Las Mareas bay was not observed.

Picture 2 – Outfall 002

Note: This outfall discharges storm water associated with industrial activity from portions of the southwast areas of the Plant. AES purchased and installed an automatic sampler and weather station powered by solar energy. A discharge into adjacent wetlands was not

observed.

Picture 3 –Outfall 003

Note: This outfall discharges storm water associated with industrial activity mainly from the Storm Water Pond's overflows into wetlands. This outfall is located on the southwest boundary of the Plant, and discharges into wetlands. Standing water was observed at the discharge location into then wetlands.

Picture 4 depicts the sampling location for the storm water discharges associated with industrial activities thru Outfall 003.

Picture 4 – Sampling Point for Outfall 003

Note: This picture shows overgrown vegetation, which might impede the collection of a representative storm water discharge in the event that the tube tip connected to the automatic sampler is covered by vegetation. A corrective action is required to address this finding.

General Description about Storm Water and Process Wastewater Collection and Reuse

The storm water runoff associated with industrial activities, non-storm water flows and process wastewater are conveyed through concrete swales into the Coal Pile Pond for storage and water re-used from the following areas:

- Power Generations Areas;
- Coal Combustion Residuals (CCR);
- Aggremax™ Storage Pile;
- Limestone Handling Areas (e.i. Dome);
- Coal Storage Piles; and
- Internal Roads.

The following pictures depict portions of the conveyance system and the Coal Pile Pond.

Picture 5 – Hydraulic Connection with the Coal Pile Pond

Note: This picture shows the end of the open channels that run along the north side and south side of the areas described above.

Picture 6 – Conveyance Channel (south side)

Note: This picture shows a segment of the concrete open channel that is located along the south side of the Aggremax pile and one of the coal storage piles.

Picture 6 – Conveyance Channel (north side)

Note: This picture shows a segment of the concrete open channel that is located along the north side of the coal storage piles and Limestone Storage Dome.

The storm water associated with industrial activities and the non-storm water flows (as authorized in the MSGPs) from Outfall 002 and Outfall 003 are discharged into wetlands, which are waters of the United Stated. The storm water associated with industrial activity and non-storm water (as authorized in the MSGPs) from Outfall 001 are discharged into Las Mareas Bay, a navigable water of the United States.

5. NPDES PERMIT COVERAGE

2008 MSGP

On September 29, 2008, EPA issued the 2008 MSGP (73 Fed. Reg. 56,572). The 2008 MSGP became effective on September 29, 2008 and expired on September 29, 2013. The 2008 MSGP authorized the discharges of storm water associated with industrial activity and certain non-storm water flows.[8] Pursuant to 5 U.S.C. § 558(c) and 40 C.F.R. § 122.6(a), coverage under the 2008 MSGP was administratively extended for those operators that obtained coverage under the 2008 MSGP prior to September 29, 2013.

On January 26, 2009, AES filed a Notice of Intent (NOI) form to seek coverage under the 2008 MSGP for the storm water discharges associated with industrial activity from the Dock into waters of the United States. EPA deemed the NOI to be incomplete and inaccurate.

On August 29, 2013, AES filed a modification to the NOI form. EPA found that the modification to the NOI was complete and accurate, and issued authorization to discharge under the 2008 MSGP beginning on August 29, 2013. The 2008 MSGP tracking number assigned to the AES was PRR05BL65.

2015 MSGP

On June 4, 2015, EPA re-issued the MSGP, which is commonly referred to as the "2015 MSGP." The 2015 MSGP became effective on June 4, 2015 and expires on June 4, 2020. Among others, the 2015 MSGP required operators of facilities with storm water discharges associated with industrial activity to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), prepare and submit a complete and accurate NOI, conduct inspections, performed visual examination of storm water discharges, perform benchmark monitoring, maintain records on-site, and prepare and submit reports to EPA.[9]

On October 21, 2016, the EPA Inspector reviewed the EPA National Databases, and found that AES filed an NOI to seek coverage under the 2015 MSGP and obtained 2015 MSGP coverage beginning on October 3, 2015. The 2015 MSGP tracking number assigned to the AES was PRR053093.[10]

Figure 1 depicts the information that the EPA Inspector found in the ICIS Database.

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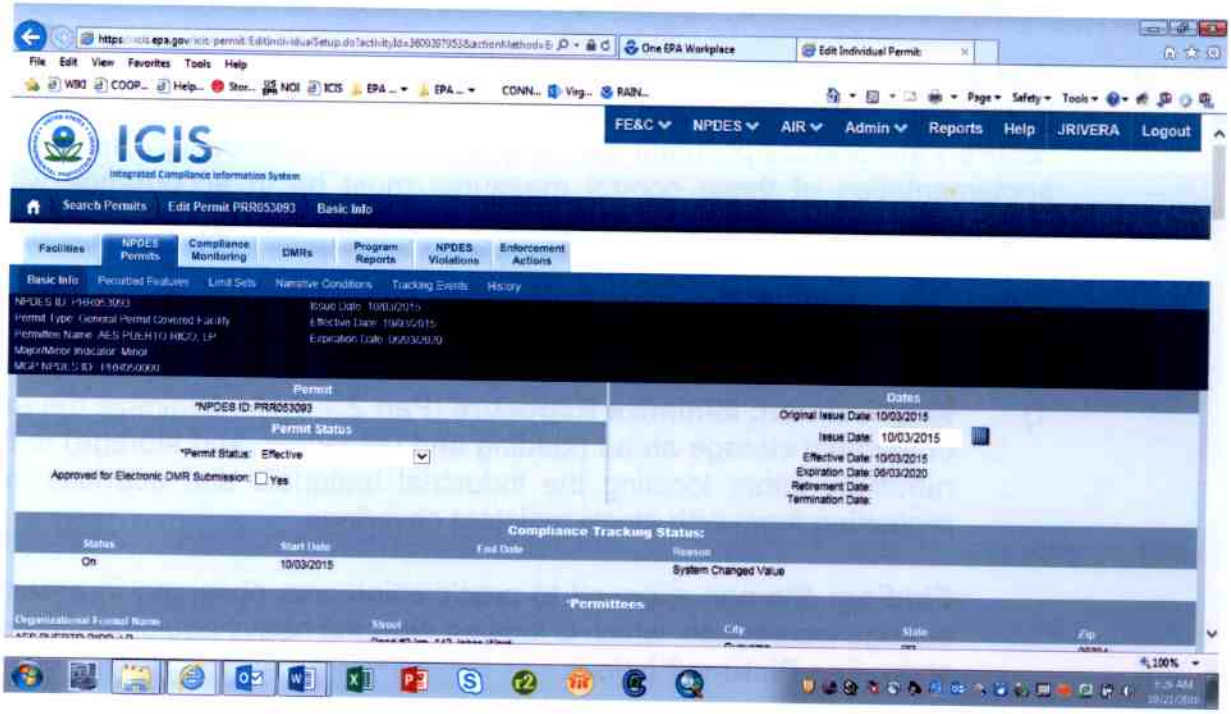
[8] See 40 C.F.R. § 122.26(b)(14) for the definition of "storm water associated with industrial activity."
[9] Table 1-2 of the 2015 MSGP established the NOI submittal deadlines for those operators of industrial activities that were authorized for coverage under the 2008 MSGP. The deadline was September 2, 2015, unless EPA notified the operator that the deadline was extended.
[10] The National Databases were the "Integrated Compliance Information System" (ICIS) and the "Enforcement and Compliance History On-Line" (ECHO).

Figure 1



6. ENTRY MEETING

Prior to the Facility walkthrough, the EPA Inspector met with AES's representatives to discuss the purpose and focus of the Inspection, the areas to be visited dueing the walkthrough and the Inspection schedule.

7. FINDINGS OF THE FACILITY WALKTHROUGH

Upon completion of the entry meeting, in which the EPA Inspector explained the purpose of the Inspection, a site walkthrough was performed. Engineers Ávila, Rivera, Labayén and González, were AES's principal representatives during the course of the walkthrough. The following presents the observation and areas of concerned relative to the Facility walkthrough:

a. a discharge was not observed thru Outfall 001. The sampling location was clean and free of debris;

b. a discharge was not observed thru Outfall 002. The sampling location was clean and free of debris;

c. a discharge was not observed thru Outfall 003. The sampling location had overgrown vegetation, which if not maintained, may prevent AES from taking a

representative sample for its visual assessments of storm water discharges and benchmark monitoring required by the AOC and the 2015 MSGP;[11]

d. Part 2.1 (Control Measures) of the 2015 MSGP requires AES to select, design, install, and implement control measures (including best management practices or "BMPs") to minimize pollutant discharges. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer's specifications.

The following address the Inspector's observations during the Facility walkthrough for each of the Control Measures required in the 2015 MSGP:

1) **Requirement: Minimize Exposure** (Part 2.1.2.1) – Minimize the exposure of material storage areas (loading and unloading, and storage) to rain and runoff by either locating the industrial materials and activities inside or protecting them with storm resistant coverings.

Finding: Storage exposed to precipitation was observed in areas near a storage warehouse, which is located near the heavy equipment mechanical shop. See **Picture 7** below:

Picture 7

2) **Requirement: Good Housekeeping** (Part 2.1.2.2) – Keep clean all exposed areas that are potential sources of pollutants, using such measures (i.e. sweeping) at regular intervals.

[11] See Parts 4.2. and 6.2 of the 2015 MSGP concerning the requirements to conduct the visual assessments and benchmark monitoring of storm water discharges at the regulated storm water discharge outfalls at the Facility.

Finding: AES purchased a mechanical sweeper vehicle, but was not in use at the time of the Inspection due to a flat tire. See **Picture 8** below:

Picture 8

3) **Requirement: Maintenance** (Part 2.1.2.3) – Regularly maintain and repair systems to avoid situations that may result in the releases of pollutants in storm water discharges into the receiving waters. Maintain all control measures that are used to achieve the effluent limits in effective operating condition.

Finding: Adequate maintenance of the storm water collection system on the south and north side of the Aggremax and Coal storage piles was observed. Lack of maintenance to the channel that conveys runoff from the power generation area to the Aggremax storage pile area was observed.

Finding: Repair and maintenance to the CCR truck loading building was undergoing. See **Picture 9** below:

Picture 9

Finding: The super silt fence located on the west side of the coal storage pile required a replacement.

Finding: Soil stabilization practices were implemented in the drainage areas near Outfall 002, which is located on the southeast area of the Plant. **Picture 10** depicts crushed stone stabilization in the internal road, a riprap-type stone covering soils, and a silt fence.

Picture 10

4) **Requirement: Management of Runoff** (Part 2.1.2.6) – Divert, infiltrate, reuse, contain, or otherwise reduce storm water runoff, to minimize pollutants in the discharges.

Comment: AES should evaluate the diversion and reuse of the first flush in all storm water discharges thru Outfall 002 to bring the discharges into compliance with the requirements of the 2015 MSGP.[12]

Finding: The Storm Water Pond was found in operation. See **Picture 11** below.

Picture 11

5) **Requirement: Dust Generation & Vehicle Tracking of Industrial Materials** (Part 2.1.2.12) – Minimize generation of dust and off-site tracking of raw, final, or waste materials.

Finding: This requirement, and paragraphs 72.c and 73 of the AOC, are addressed elsewhere below in this Report.

6) **Requirement: Fugitive Dust Emissions** (Part 8.O.4.1) – Minimize fugitive dust emissions from coal handling areas.

Finding: The water sprinkler system was in operation. **Picture 12** below:

[12] See Part 6.2.1.2 of the 2015 MSGP (data exceeding benchmarks).

Picture 12

Finding: This requirement, and paragraphs 72.c and 73 of the AOC, are addressed elsewhere below in this Report.

7) **Requirement: Ash Loading Areas** (Part 8.O.4.11) – Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before the departure of each loaded vehicle.

Finding: Repair and maintenance to the CCR truck loading building was undergoing. See **Picture 9** above.

8) **Requirement: Areas Adjacent to Disposal Ponds** (Part 8.O.4.12) – Minimize contamination of surface runoff from areas adjacent to disposal ponds. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

Finding: Exposed materials and equipment was observed between the Limestone Dome and coal storage pile. See **Picture 13** below:

Picture 13

8. OTHER FINDINGS

AES has not modified the most recent version of the SWPPP prepared for the Facility to include and/or make reference to the Dust Control Standard Operating Procedure ("Dust Control SOP" or "Dust Control Plan") prepared for the Plant. The EPA Inspector reviewed the Dust Control SOP, and its comment are provided elsewhere below in this Report.

9. EXIT MEETING

Upon completion of the Facility walkthrough, the EPA Inspector met with AES' representatives. The EPA Inspector provided engineer Rivera with an exact and unaltered copy of all the photographs that the EPA Inspector took during the course of the Inspection walkthrough.[13]

The EPA Inspector acknowledged that AES submitted Quarterly Progress Reports (QPR) pursuant to AOC, and that EPA's review of the Dust Control SOP was pending.

Further, AES and the EPA Inspector discussed several options concerning the termination of the AOC. The parties agreed to evaluate and further discuss this matter.[14]

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[13] The EPA Inspector used a Nikon Camara (Model Coolpix P530, Series 30059740) to document his observations during the Inspection walkthrough.

[14] By letter dated September 6, 2016, AES requested termination of the AOC. This Inspection report does not respond to AES' request for termination of the AOC.

10. POST INSPECTION RECORD'S REVIEW

A. REVIEW OF AES' COMPLIANCE WITH THE AOC[15,16]

Paragraph 77 of the AOC requires AES to submit Quarterly Progress Reports (QPR) that describe the current status and progress of AES' actions taken to comply with the Provisions of the AOC, including a cost report detailing the expenses incurred as of the date of the QPR. The QPRs are due to EPA and the Puerto Rico Environmental Quality Board no later than the 15th day of the following month following the month that is subject to the QPR. The AOC included 13 Ordered Provisions that AES must comply with.

The following provides EPA's evaluation of AES' compliance with the ordered Provisions included in the AOC. The EPA evaluation was based on the review of the NPDES files located at the CEPD office in Guaynabo, Puerto Rico, the National Databases, and the QPRs that AES submitted to EPA under the requirements of the AOC.

A summary of each Ordered Provision is provided followed by EPA's comments and areas of concern.

⇨ *Paragraph 65* – Except as otherwise indicated in this Order, at all times AES shall comply with the CWA, its NPDES implementing regulations, the MSGP, and any NPDES permit AES subsequently applies for and obtains.

Comment: This Report provides an evaluation of AES' compliance with the AOC and the 2015 MSGP. The EPA Inspector is not making a determination about AES's compliance with this Provision of the AOC.

⇨ *Paragraph 66* – Within thirty (30) calendar days of the Effective Date of this Order, AES shall complete and submit the MDMR forms for the benchmark monitoring conducted pursuant to the requirements of the ACO and [2008] MSGP.[17]

Comment: On March 20, 2015, AES sent to EPA the following MDMR forms, including supporting documentation (i.e., Laboratory Reports, Chain of Custody Records):

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[15] By electronic communication, EPA notified AES that it had corrected typographical errors in paragraphs 67, 69, 72, and 77 of the AOC.

[16] By letter dated April 2, 2015, EPA submitted to AES its review of AES's submittals concerning paragraphs 66, 68, 69,70, and 71 of the AOC. EPA requested AES to submit a revised report corresponding to the December 19, 2013 Comprehensive Site Inspection. By letter dated April 21, 2015, AES provided its response to the EPA April 2, 2015 letter.

[17] The term MDMR means MSGP Discharge Monitoring Report.

- ✓ MDMR dated March 17, 2015 (corresponded to the October to December 2013 period);
- ✓ MDMR dated March 17, 2015 (corresponded to the January to March 2014 period);
- ✓ MDMR dated March 19, 2015 (Outfalls 002 and 004 only; corresponded to the April to June 2014 period);
- ✓ MDMR dated January 17, 2015 (Outfall 003 only; corresponded to the April to June 2014 period);
- ✓ MDMR dated January 17, 2015 (corresponded to the July to September 2014 period);
- ✓ MDMR dated January 17, 2015 (corresponded to the October to December 2014 period); and
- ✓ MDMR dated March 9, 2015 (corresponded to the January to March 2015 period);

No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 67* – Within sixty (60) calendar days of the Effective Date of this Order, AES shall prepare, for EPA review and approval, a storm water sampling SOP (SW Sampling SOP) to conduct, document and submit storm water sampling data reports according to the quarterly visual assessment of storm water discharges and benchmark monitoring requirements in the MSGP. AES shall begin implementing the SW Sampling SOP upon its submission to EPA for review and approval. Any changes required to the SW Sampling SOP by EPA shall be made by AES within thirty (30) calendar days of EPA's request and be fully implemented at that time.

Comment: By letter dated April 13, 2015, AES submitted to EPA the SW Sampling SOP, which was signed and dated on April 13, 2015. EPA's comments concerning the SW Sampling SOP are provided below:

- ✓ Page 1 – The Approvals Section was left blank;
- ✓ Page 3 – The Purpose Section should be modified to reflect the 2015 MSGP requirements;[18]

[18] References to the 2008 MSGP are found throughout the SOP. AES should modify the SOP to reflect the 2015 MSGP, where applicable (i.e. Section V, page 4 – Applicable Regulatory Requirements).

- ✓ Page 3 – The Responsibilities Section can include the Storm Water Compliance Coordinator;

- ✓ Page 4 – The 2015 MSGP sector applicable to the Facility is Sector O, Steam Electric Generating Facilities. The SOP should be revised accordingly;

- ✓ Page 8 – The Review and Reporting Section does not provide for the signatory authorities for the MDMRs. Note that under the 2015 MSGP, MDMRs are submitted to EPA electronically;

- ✓ Page 10 – Update the Revision History Section;

- ✓ Appendix 3 – Include in the Storm Water Quarterly Visual Assessment Flowchart the time that the sampling personnel has to inspect the sample taken and timetable for the preparation of sampling documentation;

- ✓ Appendix 5 – Include in the Storm Water Benchmark Monitoring Flowchart the time AES has to submit the MDMR once the laboratory report is received by AES; and

- ✓ Appendix 10 – Complete the Approvals Section on page 1 of the Rain Gauge SOP.

AES should revise its SW Sampling SOP according the comments above.

⇨ *Paragraph 68* – Upon the Effective Date of this Order and for a period of one year, AES shall conduct benchmark monitoring and analyze samples according to Part 6.1.3 (measurable storm event), Part 6.1.4 (sample type), Part 6.1.5 (adverse weather condition), Part 6.1.7 (monitoring periods), Part 6.2.1.1 (applicability of benchmark monitoring), Part 6.2.1.2 (benchmark monitoring schedule), Part 8.O.7 (sector-specific benchmark for steam electric power generating facilities) and Part 8.Q.6 (sector-specific for water transportation) of the MSGP.

Comment: AES conducted benchmark monitoring and analyzed samples in accordance with the requirements of the AOC. **Figure 2** below depicts the results of the benchmark monitoring data reported by AES in its QPR, dated October 14, 2015.

Figure 2

AES Puerto Rico
Discharge Monitoring Reports
Year 2015

Quarter	Period	Outfall 001				Outfall 002				Outfall 003			
		Total Fe (mg/l)	Total Al (mg/l)	Total Pb (mg/l)	Total Zn (mg/l)	Total Fe (mg/l)	Total Al (mg/l)	Total Pb (mg/l)	Total Zn (mg/l)	Total Fe (mg/l)	Total Al (mg/l)	Total Pb (mg/l)	Total Zn (mg/l)
1	ENE-MAR 2015	0.344	0.568	0.002	0.124	0.272	0.947	0.004	0.006	0.396	0.912	0.007	0.009
2	ABR-JUN 2015	0.332	0.463	0.01	0.079	0.344	0.448	0.027	0.011	ND	ND	ND	ND
3	JUL-SEP 2015	0.755	0.684	0.008	0.161	0.094	0.05	0.021	0.009	0.452	0.405	0.017	0.041
4	OCT-DEC 2015												
Quarterly AVERAGE		0.477	0.572	0.007	0.121	0.237	0.482	0.017	0.009	0.424	0.659	0.012	0.025
Benchmark Concentration		1.0	0.75	0.262	0.260	1.0	0.75	0.262	0.260	1.0	0.75	0.262	0.260

ND = No Discharge

No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 69* – Until Termination of this Order, AES shall prepare and submit MDMRs referred to in Paragraph 68 above, in accordance with the schedules established therein.

Comment: On March 20, 2015, AES submitted to EPA a MDMR form, dated March 9, 2015, and supporting documentation (i.e., Laboratory Reports, Chain of Custody Records) corresponding to the January to March 2015 period.

Comment: On July 30, 2015, AES submitted to EPA a MDMR form, dated July 28, 2015, and supporting documentation (i.e., Laboratory Reports, Chain of Custody Records) corresponding to the April to June 2015 period.

Comment: On October 14, 2015, AES submitted to EPA MDMR forms, dated August 28, 2015, and supporting documentation (i.e., Laboratory Reports, Chain of Custody Records) corresponding to the July to September 2015 period.

Comment: On January 15, 2016, AES submitted to EPA MDMR forms, dated January 15, 2016, and supporting documentation (i.e., Laboratory Reports, Chain of Custody Records) corresponding to the October to December 2015 period.

No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 70* – Within thirty (30) calendar days of the Effective Date of this Order, AES shall submit a detailed report concerning the implementation of each of the action items included in the BMPs Matrix table and schedule, which EPA approved in its May 5, 2013 letter. AES shall supplement this information

with documentation, which shall include at a minimum, photo-documentation and an updated BMPs Matrix table.

Comment: On March 25, 2015, AES submitted to EPA a report describing each action taken, photo-documentation and an updated BMPs Matrix table.

No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 71* – Within thirty (30) calendar days of the Effective Date of this Order, AES shall prepare and submit the comprehensive site inspection reports pursuant to Part 4.3.2 of the MSGP for the December 13, 2012 and December 19, 2013 comprehensive site inspections.[19]

Comment: On March 20, 2015, AES submitted to EPA its Annual Comprehensive Inspection Report for the January to December 2012 period, including the Annual Reporting Form, which was signed and dated January 17, 2013.

Comment: On March 25, 2015, AES submitted to EPA its Annual Comprehensive Inspection Report for the January to December 2013 period, including the Annual Reporting Form, which was signed and dated March 17, 2014.

Comment: On May 11, 2015, AES submitted to EPA its Annual Comprehensive Inspection Report for the January to December 2014 period, including the Annual Reporting Form, which was signed and dated January 23, 2015.

Comment: On October 14, 2015, AES submitted to EPA its Annual Reporting Form, which was signed and dated October 14, 2015. This Annual Reporting Form pertained to the January to December 2015 period. AES did not submit the Annual Comprehensive Inspection Report corresponding to the same period in this submittal. However, AES submitted the Annual Comprehensive Inspection Report in its QPR, dated January 14, 2016.

No further action is required concerning this Provision of the AOC.

[19] See footnote 13 above.

Paragraph 72 – Within ninety (90) calendar days of the Effective Date of this Order, AES shall prepare and submit a detailed Plan of Action (POA), for EPA review and approval, and subsequent implementation by AES.[20,21,22]

By letter dated June 8, 2015, AES submitted to EPA a draft POA. EPA's comments concern its review of the draft POA are provided below.

Comment on Subparagraphs 72.a – AES addressed the requirements of this subparagraph in the POA. No further action is required concerning subparagraph 72.a of the AOC.

Comment on Subparagraph 72.b – AES addressed the requirements of this subparagraph in the POA. No further action is required concerning subparagraph 72.b of the AOC.

Comments on Subparagraph 72.c concerning the Facility Dust Control Plan are presented below:

- ✓ Page 1 – The Approvals Section was left blank;
- ✓ Page 3 – Part 1 (Purpose) makes reference to the 2008 MSGP. Amend to reflect requirements for the 2015 MSGP;
- ✓ Page 4 – Part 3.2. and 3.3 (Responsibilities) do not provide for documentation describing the rationale for limiting and/or ceasing operation to minimize dust generation and emissions;
- ✓ Page 5 – Section 6 (Controls) provides the monitoring schedules for each practice. The Plant operates on 24-hour / 7-day week basis. The Dust Control Plan should describe the controls and the monitoring schedule for the evening hours;
- ✓ Page 6 – Section 6 (Controls) indicates that AES will use a daily operational inspection checklist to monitor the implementation and effectiveness of the control measures. A copy of the checklist was

[20] Paragraph 72.1 - Review and revision of the selection, design, installation, and implementation of AES' control measures in accordance with Part 3 of the 2008 MSGP.

[21] Paragraph 72.b - Description of each action to be taken to comply with Part 3.2 (Conditions Requiring Review to Determine if Modifications Are Necessary) and Part 6.2.1.2 (Benchmark Monitoring Schedule) of the 2008 MSGP, which requires AES to review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet the effluent limits in the 2008 MSGP. AES shall perform this review for aluminum and iron.

[22] Paragraph 72.b - A plan for the minimization and control of dust (including fugitive dust) from coal combustion residuals and/or Agremax™ at the Facility and during transport. The Dust Control Plan shall include site management procedures such as wetting the Agremax™ storage pile at the Facility to ensure compliance with applicable MSGP requirements relating to dust control, and an implementation schedule.

attached to the draft Dust Control Plan. The checklist did not include the areas in which coal combustion residuals are generated at the power generation areas of the Plant;

- ✓ Page 9 – Subsection 6.3 (Stockpile) indicates that windbreaks are not practical controls for the Agremax™ stockpile. The Dust Control Plan should include the design and implementation of windbreaks to provide a permanent structural best management practice;

- ✓ Appendix 1 – The maps for the Plant and Dock did not include dust generation from the coal combustion process in the power generation areas of the Plant; and

- ✓ Others – The Dust Control Plan did not provide for other mechanical dust control measures (e.g., vacuum collection systems) in the coal combustion generation and transfer areas.

⇨ *Paragraph 73* – AES' POA, and its amendments thereto, shall be signed and certified by a licensed engineer who is authorized to conduct the engineering profession in the Commonwealth of Puerto Rico. This licensed engineer shall have demonstrated expertise in design and implementation of fugitive dust minimization and controls; engineering practices for soil stabilization practices, storm water management, and pollution prevention.

Comment: The POA was signed and certified by a licensed engineer authorized to conduct the engineering profession in the Commonwealth of Puerto Rico.

Any further amendments to the POA should comply with this Provision of the AOC.

⇨ *Paragraph 74* – Within thirty (30) days or by such other deadline approved by EPA, AES shall modify the POA to address EPA's comments. AES shall, upon approval by EPA, implement the POA. AES shall proceed to take any actions required by the approved POA, in accordance to the schedule contained therein, as approved in writing by EPA.

Comment: AES' compliance with this Provision of the AOC cannot be determine at this time.

⇨ *Paragraph 75* – No later than sixty (60) days after the Effective Date of this Order, AES shall create, in addition to the existing Environmental Coordinator Position, a Storm Water Compliance Coordinator (Coordinator) position at the Facility.

Comment: By letter dated May 16, 2015, AES notified EPA that it had hired the Coordinator. The Coordinator was present during the Inspection. No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 76* – No later than sixty (60) days after the Effective Date of this Order, AES shall submit a certification stating that AES created the position of, and hired, the Coordinator referenced in Paragraph 75, above.

Comment: See comment for paragraph 75 above. No further action is required concerning this Provision of the AOC.

⇨ *Paragraph 77* – Until Termination of this Order, AES shall prepare and submit Quarterly Progress Reports (QPR) that describe the current status and progress of AES' actions taken to comply with the Provisions of this Order. AES shall:

Comment: On April 1, 2015, AES submitted to EPA its first QPR (March 18 to March 31, 2015), which was signed and dated March 26, 2015. AES did not include any cost report in its first QPR.

Comment: On July 13, 2015, AES submitted to EPA its second QPR (April to June 2015 period), which was dated July 10, 2015. A review of the cost report in this QPR revealed that AES did not provide the expenses incurred and will incur concerning the Storm Water Compliance Coordinator (annual basis), visual assessment of storm water discharges and benchmark monitoring, preparation of POA and preparation of the SW Sampling SOP. **Figure 3** depicts the cost provided by AES in its second QPR.

Figure 3

EPA ACO Expenses			
Activities	Expenses for this period	Expenses to Date	PO Limit
Sweeper Dulevo 200 Quattro	$65,250.00	$65,250.00	$65,250.00
Quick-Cover roll up style roll off cover	$1,898.00	$1,898.00	$1,898.00
Quick-Cover replacement wheel handle	$600	$600	$600
TOTAL	**$67,748.00**	**$67,748.00**	**$67,748.00**

Comment: On October 14, 2015, AES submitted to EPA its third QPR (July to September 2015 period), which was signed and dated October 14, 2015. AES did not include any cost report in its third QPR.

Comment: On January 14, 2016, AES submitted to EPA its fourth QPR (October to December 2015 period), which was signed and dated January 14, 2016. AES did not include any cost report in its fourth QPR.

Comment: On April 15, 2016, AES submitted to EPA its fifth QPR (January to March 2016 period), which was signed and dated April 15, 2016. AES did not include any cost report in its fifth QPR.

Comment: On July 15, 2016, AES submitted to EPA its sixth QPR (April to June 2016 period), which was signed and dated April 14, 2016. AES did not include any cost report in its sixth QPR.

Comment: On October 15, 2016, AES submitted to EPA its seventh QPR (July to September 2016 period), which was signed and dated October 14, 2016. AES did not include any cost report in its seventh QPR.

⇨ *Paragraph 90* – After AES has complied with all the Ordered Provisions of this Order, Respondent may serve upon EPA a Request for Termination, stating that Respondent has satisfied those requirements, together with all necessary supporting documentation.

Comment: On September 6, 2016, AES submitted to EPA a request for termination of the AOC. This matter is not addressed in this Report.

B. REVIEW OF AES' COMPLIANCE WITH THE 2015 MSGP

With Respect to AES' Coverage Under the 2015 MSGP – By electronic communication to AES's President, dated October 3, 2015, EPA notified AES that its NOI had been accepted and authorization to discharge under the 2015 MSGP became effective on October 3, 2015.[23] The EPA Inspector reviewed the electronic NOI that AES submitted, and found it complete.[24]

With Respect to Visual Assessments of Stormwater Discharges – AES performed and documented visual assessments for:

[23] As such, coverage under the 2008 MSGP terminated on October 2, 2015. AES became subject to the terms and conditions of the 2015 MSGP on October 3, 2015.
[24] Detailed discussion about MSGP's coverage is provided herein above.

- ⇨ outfall 001 – December 8, 2015; February 19, 2016; and April 1, 2016 (the visual assessment was not conducted during the reported quarter);[25]

- ⇨ outfall 002 – December 16, 2015; February 19, 2016; April 1, 2016; and August 13, 2016; and

- ⇨ outfall 003 – November 23, 2015; February 19, 2016; April 1, 2016; and July 25, 2016.

With Respect to Benchmark Monitoring of Stormwater Discharges – Based on Parts 6.1.7 and 6.2.1.2 of the 2015 MSGP, AES is required to conduct Benchmark Monitoring beginning on the first full quarter of the date of discharge authorization (January to March 2016).[26] Comments concerning Benchmark Monitoring are presented below:

- ⇨ Comment – By letter dated April 15, 2016, AES sent to EPA its fifth QPR, which included MDMRs, dated April 15, 2016. A review of the MDMRs, Chain of Custody Records and laboratory analysis report revealed that:

  - ✓ The benchmark value of 1 mg/l for Iron was exceeded (1.18 mg/l) at outfall 001;

  - ✓ The benchmark values of 0.75 mg/l for Aluminum and 1 mg/l for Iron were exceeded (17.1 mg/l and 14 mg/l, respectively) at outfall 002; and

  - ✓ The CCR did not indicate the method of preservation [e.g., Nitric Acid (HNO_3, pH<2)], the sample type (e.g., grab vs. composite) and sampling method (e.g., automatic sampler vs. manual sampling) for outfalls 001, 002 and 003.

- ⇨ Comment – By letter dated July 15, 2016, AES sent to EPA its sixth QPR, which included MDMRs, dated May 23, 2016. A review of the MDMRs, Chain of Custody Records and laboratory analysis report revealed that:

  - ✓ The benchmark values of 0.75 mg/l for Aluminum and 1 mg/l for Iron were exceeded (4.69 mg/l and 8.3 mg/l, respectively) at outfall 002; and

  - ✓ The CCR did not indicate the method of preservation [e.g., Nitric Acid (HNO_3, pH<2)], the sample type (e.g., grab vs. composite) and sampling

[25] AES indicated that the automatic sampler installed for the collection of samples at outfall 001 did not take the sample due to an equipment program failure.

[26] Benchmark monitoring must be performed on a quarterly basis for four consecutive quarters. When conditions prevent from obtaining four samples in four consecutive quarters, monitoring must continue until obtaining four samples.

method (e.g., automatic sampler vs. manual sampling) for outfalls 001, 002 and 003.

⇨ Comment – By letter dated October 15, 2016, AES sent to EPA its seventh QPR, which included MDMRs, dated September 9 and October 5, 2016. A review of the QPR revealed that:

✓ A sample was not taken at outfall 001 for the July to September 2016;[27] and

✓ A copy of the CCRs and laboratory analysis report for outfalls 002 and 003 were not included.

With Respect to Impaired Water Monitoring (Outfall 001 only) – Based on the information provided by AES its electronic NOI filed for coverage under the 2015 MSGP, AES indicated that Las Mareas Bay is impaired, and provided the pollutants causing the impairment. The EPA Inspector did not assess AES' compliance with this requirement because AES has an entire calendar year to take the sample and report the laboratory analytical results.[28]

11. OTHER COMMENTS

The EPA Inspector AR took all photographs and videos during the course of the Inspection using an EPA-owned camera, as described below:

Brand Name: Nikon
Model: Coolpix P510
Serial Number: 31106100.

A copy of all photographs taken (originals and unaltered) during the course of the Inspection walkthrough of the Facility were provided to Mr. Rivera during the exit meeting.

[27] See comments above concerning visual assessment of stormwater discharges for the same monitoring period.

[28] Part 6.2.4.1 (Permittees Required to Monitor Discharges to Impaired Waters) of the 2015 MSGP indicates that beginning in the first full quarter following September 2, 2015 or the date of discharge authorization, whichever date comes later, the permittee must monitor all pollutants for which the waterbody is impaired and for which a standard analytical method exists once per year at each outfall (except substantially identical outfalls) discharging storm water to impaired waters without an EPA-approved or established TMDL.

End of Report

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Jan. 4, 2017
Date